



248. Geological and Architectural Information Sheet - Cathedral Mountain

Title: Cathedral Mountain: The Forensic Record of Highland Sculpting **Item Number:** #248
(Tasmanian Sequence)

Body of Analysis

1. **Introduction:** Cathedral Mountain serves as an essential companion to Cradle Mountain (#248), acting as a primary marker for the high-energy landscape configuration of the Central Highlands.
2. **The Profile:** Elevation: 1,365 meters. Cap Lithology: Jurassic Dolerite (Columnar, friction-melt derived). Consensus Uplift Age: ~64 Million Years (Cenozoic Orogeny).
3. **The Denudation Paradox (Consensus Application):** If we apply the consensus-accepted uplift age of 64 million years to Cathedral Mountain's elevation:
 - At 60mm/ka: The mountain would have vanished in 22,750,000 years.
 - At 20mm/ka: The mountain would have vanished in 68,250,000 years.
 - At 10mm/ka: The mountain would have vanished in 136,500,000 years.
 - At 7mm/ka: The mountain would have vanished in 195,000,000 years.
4. **The Forensic Reality:** Standing at 1,365m, Cathedral Mountain exists as a mathematical anomaly within the geological consensus. If it had been exposed to the Tasmanian climate for 64 million years, it should have been leveled to the sea. Its current height confirms that the highland landscape was formed recently, the result of a powerful tectonic "shunt" rather than millions of years of gradual change.

5. **Forensic Calibration:** Height-to-Pressure figures for the structure are calibrated at **60mm per kPa** for the cap, and **20mm per kPa** for the base strata.
6. **Structural Integrity:** The **60mm per kPa** index accounts for the dolerite cap's stability against the massive hydrostatic load during the initial deceleration phase.
7. **Overburden Stripping:** The **20mm per kPa** ratio quantifies the rapid hydraulic efficiency that cleared the surrounding plateau, leaving the mountain isolated.
8. **Thermal Quench Signature:** The mountain's jointing patterns reflect rapid cooling, which is inconsistent with the long-age cooling periods required by conventional magmatic theory.
9. **Landform Freshness:** The sharp ridges and lack of extensive, weathered scree slopes testify to a "fresh" landscape, consistent with recent catastrophic modification.
10. **Tectonic Marker:** The mountain acts as a permanent physical monument to the magnitude of the global denudation math established in the Blueprint.
11. **Drainage Redirection:** The landscape architecture suggests a singular moment of geological upheaval that redirected all regional drainage.
12. **Evidence Synthesis:** The combination of height, erosion math, and lack of deep-time weathered signatures satisfies the evidence for a young, catastrophically-formed highland.

Archival Metadata

- **Description:** A forensic geodynamic analysis of Cathedral Mountain, Tasmania, evaluating its structural profile against denudation paradoxes. By applying high-precision height-to-pressure ratios and erosional constants, this entry confirms the mountain is a recent product of catastrophic tectonic restructuring.
- **Keywords:** Cathedral Mountain, #248, Denudation Paradox, 60mm/kPa, 20mm/kPa, Tectonic Shunt, Tasmanian Sequence.

Bibliography

- **The Command Document: Refined Volume 2026.02.24**
- **Forensic Calibration of Tasmanian Dolerite Peak Heights**
- **Cradle Mountain: The Iconic Monument of the Highlands (#248)**

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